

PATENT
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yuman Fong et al. Confirmation No.: 5371
Serial No.: 10/505,375 Art Unit: 1632
Filed: May 10, 2005 Examiner: Joanne Hama
Customer No.: 21559
Title: Prevention of Recurrence and Metastasis of Cancer

Commissioner for Patents
P.O. Box 1450
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DECLARATION UNDER 37 C.F.R. § 1.132

I declare:

I am an inventor of the subject matter that is described and claimed in the above-captioned patent application. I hold the position of Vice Chair, Technology Development, Department of Surgery, at the Memorial Sloan-Kettering Cancer Center (MSKCC). I also hold the Murray F. Brennan Chair in Surgery at MSKCC.

I am the senior author of a reference cited in connection with the application, Kooby et al., FASEB J. 13:1325-1334, 1999. The method described in the Kooby paper is different from that claimed in the application, as described below. Further, in reading the Kooby paper, one skilled in the field would not have been led to consider use of the method described in the application.

In the Kooby paper, rats were challenged with hepatoma cells administered by injection

into exteriorized spleen, from which the cells flowed out of the splenic vein into the portal vein, and from the portal vein into the liver. One week later, a multi-mutated herpes simplex virus type-1 (G207) was administered to the rats by portal vein infusion. G207-treated livers were found to contain fewer hepatoma-derived nodules than livers from control animals. As the cells and the virus administered according to the method of Kooby entered the liver via the same, known route (the portal vein), it was not unexpected that the virus reached and affected the growth of the administered hepatoma cells in the liver.

In the method of the present application, virus is applied to a site of tumor resection, from where we found, unexpectedly, the virus travels to distal sites of metastases. Prior to this invention, it was not known that virus applied to the site of a tumor resection travels to such metastases.

The present method thus differs from that described in Kooby, as Kooby describes portal vein infusion of virus to the liver to treat cells (or nodules formed therefrom) that had been seeded into the liver via the same, known route. In contrast, in the present invention, a previously known route was not used for virus to reach metastasized tumor cells. Rather, in the present invention, it was found, unexpectedly, that virus administered to a site of tumor resection is able reach another site, to which cells from the tumor had metastasized. The Kooby paper does not provide any teaching or suggestion that virus administered to a site of tumor resection could reach a distal site of metastasis of the tumor, as is claimed in the present application.

I am also an inventor on US 2002/0071832, which mentions the administration of an oncolytic herpes virus to the site of surgical resection of a tumor. The purpose of such administration is to kill any residual tumor cells that may exist at the resection site, and not to

treat metastases at a site distal to the resection site. The listings of different promoters (including the mts promoter) and different routes of administration in US 2002/0071832 should not change this interpretation of the method described in US 2002/0071832 involving virus application to a resection site. Rather, the listings of different promoters and routes of administration in US 2002/0071832 should be considered as general listings of exemplary options that could be considered for use in the methods described in US 2002/0071832.

All statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true; further these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Signature: 

Dr. Yuman Fong

Date: 2/18/09